

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1-28. (Canceled)

29. (Currently Amended) A semiconductor device comprising:

~~a plurality of pixels provided in a matrix form, each of the plurality of pixels comprising:~~
at least one pixel comprising:

- a first transistor;
- a second transistor;
- a third transistor;
- a fourth transistor;
- a power line;
- a signal line; and
- a scanning line,

wherein gate electrodes of said third and fourth transistors are connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line, and

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor.

30. (Currently Amended) A ~~light-emitting~~ semiconductor device according to claim 29, wherein said third and fourth transistors are of reverse polarity to said second transistor.

31. (Currently Amended) A ~~light-emitting~~ semiconductor device according to claim 29, wherein said third and fourth transistors are of the same polarity.

32. (Currently Amended) A ~~light-emitting~~ semiconductor device according to claim 29, wherein said first and second transistors are of the same polarity.

33. (Previously Presented) An electronic device comprising the semiconductor device according to claim 29, wherein said electronic device is selected from the group consisting of a light emitting display device, a digital still camera, a lap-top computer, a mobile computer, a portable image reproduction apparatus, a goggle type display, a video camera, and mobile telephone.

34. (Currently Amended) A semiconductor device comprising:
at least one pixel comprising:

- a first transistor;
- a second transistor;
- a third transistor;
- a fourth transistor;
- a power line;
- a signal line; and
- a scanning line,

wherein gate electrodes of said second, third and fourth transistors are connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,
wherein a source region of said first transistor is connected to said power line, and
wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor.

35. (Currently Amended) A ~~light-emitting~~ semiconductor device according to claim 34, wherein said third and fourth transistors are of reverse polarity to said second transistor.

36. (Currently Amended) A ~~light-emitting~~ semiconductor device according to claim 34, wherein said third and fourth transistors are of the same polarity.

37. (Currently Amended) A ~~light-emitting~~ semiconductor device according to claim 34, wherein said first and second transistors are of the same polarity.

38. (Previously Presented) An electronic device comprising the semiconductor device according to claim 34, wherein said electronic device is selected from the group consisting of a light emitting display device, a digital still camera, a lap-top computer, a mobile computer, a portable image reproduction apparatus, a goggle type display, a video camera, and mobile telephone.

39. (Currently Amended) A semiconductor device comprising:
at least one pixel comprising:

- a first transistor;
- a second transistor;
- a third transistor;
- a fourth transistor;
- a fifth transistor;

a power line;
a signal line;
a first scanning line; and
a second scanning line,

wherein gate electrodes of said second, third and fourth transistors are connected to said first scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor,

wherein a gate electrode of said fifth transistor is connected to said second scanning line,
and

wherein one of source and drain region of said fifth transistor is connected to said power line and the other is connected to the gate electrode of said first transistor.

40. (Currently Amended) A ~~light-emitting~~ semiconductor according to claim 39, wherein said third and fourth transistors are of reverse polarity to said second transistor.

41. (Currently Amended) A ~~light-emitting~~ semiconductor according to claim 39, wherein said third and fourth transistors are of the same polarity.

42. (Currently Amended) A ~~light-emitting~~ semiconductor according to claim 39, wherein said first and second transistors are of the same polarity.

43. (Previously Presented) An electronic device comprising the semiconductor device according to claim 39, wherein said electronic device is selected from the group consisting of a light emitting display device, a digital still camera, a lap-top computer, a mobile computer, a portable image reproduction apparatus, a goggle type display, a video camera, and mobile telephone.

44. (Currently Amended) A method for driving a semiconductor device comprising:
at least one pixel comprising:

a first transistor, a second transistor, a third transistor, a fourth transistor, a power line, a signal line and a scanning line,

wherein gate electrodes of said third and fourth transistors are connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor, the method for driving said semiconductor device comprising:

providing a first period in which said third and fourth transistors are on and a second period in which said third and fourth transistors are off in one frame period, wherein said second transistor is off in the first period and on in the second period; and

controlling a drain current of said first transistor in magnitude in the first period by an analog video signal.

45. (Currently Amended) A method for driving a semiconductor device comprising:
at least one pixel comprising:

a first transistor, a second transistor, a third transistor, a fourth transistor, a power line, a signal line and a scanning line,

wherein gate electrodes of said second, third and fourth transistors are connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor being connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor, the method for driving a semiconductor device comprising:

providing a first period in which said third and fourth transistors are on and a second period in which said third and fourth transistors are off in one frame period, wherein said second transistor is off in the first period and on in the second period; and

controlling a drain current of said first transistor in magnitude in the first period by an analog video signal.

46. (Currently Amended) A method for driving a semiconductor device comprising:
at least one pixel comprising:

wherein gate electrodes of said second, third and fourth transistors are connected to said first scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor,

wherein a gate electrode of said fifth transistor is connected to said second scanning line,
and

wherein one of source and drain regions of said fifth transistor is connected to said power line and the other is connected to the gate electrode of said first transistor, the method for driving said semiconductor device comprising:

providing a first period in which said third and fourth transistors are on and said fifth transistor is off, a second period in which said third and fourth transistors are off and said fifth transistor is off, and a third period in which said third and fourth transistors are off and said fifth transistor is on, wherein said second transistor is off in the first period, on in the second period and on in the third period; and

controlling a drain current of said first transistor in magnitude in the first period by an analog video signal.

47. (Currently Amended) A method for driving a semiconductor device comprising:
at least one pixel comprising:

a first transistor, a second transistor, a third transistor, a fourth transistor, a power line, a signal line and a scanning line,

wherein gate electrodes of said third and fourth transistors are both connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor, the method for driving said semiconductor device comprising:

providing a first period and a second period corresponding to respective bits of a digital video signal in one frame period, wherein in the first period, said third and fourth transistors are on and said second transistor is off and in the second period, said third and fourth transistors are off and said second transistor is on.

48. (Currently Amended) A method for driving a semiconductor device comprising:
at least one pixel comprising:

a first transistor, a second transistor, a third transistor, a fourth transistor, a power line, a signal line and a scanning line,

wherein gate electrodes of said second, third and fourth transistors are all connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line, and

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor, the method for driving said semiconductor device comprising:

providing a first period and a second period corresponding to respective bits of a digital video signal in one frame period, wherein in the first period, said third and fourth transistors are on and said second transistor is off and in the second period, said third and fourth transistors are off and said second transistor is on.

49. (Currently Amended) A method for driving a semiconductor device comprising:
at least one pixel comprising:

a first transistor, a second transistor, a third transistor, a fourth transistor, a fifth transistor, a power line, a signal line, a first scanning line and a second scanning line,

wherein gate electrodes of said second, third and fourth transistors are all connected to said first scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor being connected to the drain region of said first transistor,

wherein a gate electrode of said fifth transistor is connected to said second scanning line, and

wherein one of source and drain region of said fifth transistor is connected to said power line and the other is connected to the gate electrode of said first transistor, the method for driving said light emitting device comprising:

providing a first period, a second period and a third period corresponding to respective bits of a digital video signal in one frame period, wherein in the first period, said third and fourth transistors are on and said second and fifth transistors are off, in the second period, said third and fourth transistors are off, said second transistor is on, and said fifth transistor is off, and in the third period, said third and fourth transistors are off, said second transistor is on, and said fifth transistor is on.

50. (New) A semiconductor device comprising:

at least one pixel comprising:

a first transistor;

a second transistor;

a third transistor;

a fourth transistor;

a power line;

a signal line;
a scanning line; and
a capacitor,

wherein gate electrodes of said third and fourth transistors are connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to said drain region of said first transistor, and

wherein said capacitor is formed between said gate electrode and said source region of said first transistor.

51. (New) A semiconductor device according to claim 50, wherein said third and fourth transistors are of reverse polarity to said second transistor.

52. (New) A semiconductor device according to claim 50, wherein said third and fourth transistors are of the same polarity.

53. (New) A semiconductor device according to claim 50, wherein said first and second transistors are of the same polarity.

54. (New) A semiconductor device comprising:

at least one pixel comprising:

a first transistor;
a second transistor;

a third transistor;
a fourth transistor;
a power line;
a signal line;
a scanning line; and
a capacitor,

wherein gate electrodes of said second, third and fourth transistors are connected to said scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor, and

wherein said capacitor is formed between said gate electrode and said source region of said first transistor.

55. (New) A semiconductor device according to claim 54, wherein said third and fourth transistors are of reverse polarity to said second transistor.

56. (New) A semiconductor device according to claim 54 wherein said third and fourth transistors are of the same polarity.

57. (New) A semiconductor device according to claim 54, wherein said first and second transistors are of the same polarity.

58. (New) An electronic device comprising the semiconductor device according to claim 54, wherein said electronic device is selected from the group consisting of a light emitting display device, a digital still camera, a lap-top computer, a mobile computer, a portable image reproduction apparatus, a goggle type display, a video camera, and mobile telephone.

59. (New) A semiconductor device comprising:
at least one pixel comprising:

- a first transistor;
- a second transistor;
- a third transistor;
- a fourth transistor;
- a fifth transistor;
- a power line;
- a signal line;
- a first scanning line;
- a second scanning line, and
- a capacitor,

wherein gate electrodes of said second, third and fourth transistors are connected to said first scanning line,

wherein one of source and drain regions of said third transistor is connected to said signal line and the other is connected to a gate electrode of said first transistor,

wherein one of source and drain regions of said fourth transistor is connected to said signal line and the other is connected to a drain region of said first transistor,

wherein a source region of said first transistor is connected to said power line,

wherein one of source and drain regions of said second transistor is connected to the drain region of said first transistor,

wherein a gate electrode of said fifth transistor is connected to said second scanning line,

wherein one of source and drain region of said fifth transistor is connected to said power line and the other is connected to the gate electrode of said first transistor, and

wherein said capacitor is formed between said gate electrode and said source region of said first transistor.

60. (New) A semiconductor according to claim 59, wherein said third and fourth transistors are of reverse polarity to said second transistor.

61. (New) A semiconductor according to claim 59, wherein said third and fourth transistors are of the same polarity.

62. (New) A semiconductor according to claim 59, wherein said first and second transistors are of the same polarity.

63. (New) An electronic device comprising the semiconductor device according to claim 59, wherein said electronic device is selected from the group consisting of a light emitting display device, a digital still camera, a lap-top computer, a mobile computer, a portable image reproduction apparatus, a goggle type display, a video camera, and mobile telephone.

64. (New) A semiconductor device according to claim 29, further comprising means for maintain a voltage between said gate electrode and said source region of the said first transistor.

65. (New) A semiconductor device according to claim 34, further comprising means for maintain a voltage between said gate electrode and said source region of the said first transistor.

66. (New) A semiconductor device according to claim 39, further comprising means for maintain a voltage between said gate electrode and said source region of the said first transistor.